

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, the title has been amended, and a paragraph has been amended on page 5. Claims 1-10 and 12 are requested to be cancelled. Claims 11 and 13 are currently being amended. Claims 17-21 are being added.

This amendment adds, changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

In the Office Action, a new title was required that is clearly indicative of the invention to which the claims are directed. By this Amendment, Applicant has amended the title to be clearly indicative of the invention to which the claims are directed.

Claims 1-7 and 11-16 were rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite. By this Amendment, Applicant has amended claim 11 to define the range of frequencies in which power is supplied from the control section. Accordingly, Applicant submits that claims 11-16 are definite and in conformance with 35 U.S.C. § 112, ¶ 2.

Claims 1, 2, 4, and 11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Verkasalo (U.S. Patent No. 4,675,487). Claim 11, as amended, recites that a heating device comprises, *inter alia*, a control section that supplies power with a frequency within a range of 20.05 to 100 kHz, to the coil, wherein the predetermined characteristic frequency of the core member differs from the range of frequencies of the power that are output from the control section, and the core member is a three-dimensional rectangular body with rectangular surface having a dimension r on one side and a dimension h on another side, the shape meeting the following condition, $h/r^2 < 2.7$, or $h/r^2 > 6.3$.

Verkasalo discloses the frequency of the power taken out of a 50 Hz three-phase network is converted by a rectifier 33 and inverter 34 to a frequency within the range 0.5 to

50 kHz, which is passed through a transformer 35 and a capacitor Cs to a resonance circuit 37, which supplies the coil 30 (col. 6, lines 10-23). Verkasalo also discloses that, to keep the efficiency of the power supply high and to eliminate instability, the operating frequency is adjusted in accordance with the impedance of the resonance circuit 37 so that the operating frequency remains near but at a same distance from the resonance frequency (col. 7, lines 59-68).

In contrast to claim 11, Verkasalo fails to disclose or suggest the predetermined characteristic frequency of the core member differs from the range of frequencies of the power that are output from the control section. In fact, Verkasalo does not mention anything about the characteristic frequency of the component cores 20. Rather, Verkasalo merely discloses a difference between the operating frequency and a resonance frequency of a resonance circuit 37, not a characteristic frequency of the cores 20.

Verkasalo also fails to disclose or suggest that the core member is a three-dimensional rectangular body with rectangular surface having a dimension r on one side and a dimension h on another side, the shape meeting the following condition, $h/r^2 < 2.7$, or $h/r^2 > 6.3$. In fact, Verkasalo does not mention anything about the dimensions of the cores 20, and thus necessarily fails to meet this limitation. Accordingly, claim 11 is patentably distinguishable from Verkasalo.

Claims 3, 5-10, and 12-16 were rejected under 35 U.S.C. § 103(a) as being obvious over Verkasalo in view of Yokozeki (U.S. Patent No. 6,573,485). Even if combinable, Yokozeki fails to cure the deficiencies of Verkasalo. Like Verkasalo, Yokozeki fails to disclose or suggest the predetermined characteristic frequency of the core member differs from the range of frequencies of the power that are output from the control section, and the core member is a three-dimensional rectangular body with rectangular surface having a dimension r on one side and a dimension h on another side, the shape meeting the following condition, $h/r^2 < 2.7$, or $h/r^2 > 6.3$. Accordingly, even if combinable, claims 12-16 are patentably distinguishable from the combination of Verkasalo and Yokozeki by virtue of their dependence from claim 11, as well as their additional recitations.

The rejection of claims 3 and 7 under 35 U.S.C. § 103(a) as being obvious over Yokozeiki in view of Verkasalo is moot in view of the cancellation of claims 3 and 7.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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